<u>REMARKS / ARGUMENTS</u>

Claims 1-30 are pending in the application. Independent claim 16 has been amended. It is respectfully submitted that no new matter has been added.

During a telephone conversation with Examiner McLean-Mayo on August 28, 2003, the Examiner advised Applicants that the Amendment after Final Rejection filed June 30, 2003 would be entered into the record for the purposes of this continuation. As such, Applicants respond to the remarks of Examiner from both the Office Action dated May 1, 2003 and the Advisory Action dated July 11, 2003 written in response to the Amendment after Final.

Claim Rejections under 35 U.S.C. §102

Claims 16-20 were rejected under 35 U.S.C. §102(b) as being anticipated by McDermott et al., U.S. Patent No. 5,860,105 (hereinafter "McDermott"). As per claim 16, Applicants have generally disclosed "an apparatus for flushing the cache, comprising: a list structure for recording modifications to a plurality of cache entries wherein, wherein said list structure is located outside a cache and said list structures does not contain cache data or addresses; a cache controller adapted to query said list structure for modifications to said plurality of cache entries and generate a list of cache write-back instructions; and wherein said cache controller invalidates said plurality of cache entries corresponding to said list of cache write-back instructions." This feature, wherein the list structure is located outside a cache is prominent in Applicants' specification and other independent claims 1 and 21. Applicants have disclosed, "Preferably, list structure 44 is implemented in random access memory (RAM) with its own decoder. For purposes of the present disclosure the term RAM is intended to be interpreted very broadly. And

further still, "[e]mbodiments of the present invention may implement list structure 44 directly on the die for fast access." (Application, p. 10, para. 21) Applicants further disclose an advantage of the location of the list structure outside a cache, that "[i]n addition, queries of list structure 44 can be performed in parallel, and along a separate data path so that the accesses to cache 46 by other processes, is not blocked." (Application, p. 11, para. 22) Claim 16 has been amended to further bring out this feature of the invention, wherein the list structure is located outside a cache. Applicants submit that no new matter has been added.

As Examiner admits, McDermott does not explicitly disclose the list structure located outside the cache. Therefore, Applicants submit that independent claim 16 contains allowable subject matter, as the anticipation rejection has been rendered moot by the amended claim. Furthermore, claims 17-20, which depend from an allowable base claim 16, also contain allowable subject matter. Accordingly, Applicants respectfully request that the rejection to claims 16-20 under 35 U.S.C. §102(b) be withdrawn.

Claim Rejections under 35 U.S.C. §103

Claims 1-4, 7-12, 14, 25-27 and 29-30 were rejected under 35 U.S.C. §103(a) as being unpatentable over by McDermott et al., U.S. Patent No. 5,860,105 (hereinafter "McDermott") in view Masubuchi et al., U.S. Patent No. 6,490,105 (hereinafter "Masubuchi"). Claims 5 and 6 were rejected over McDermott in view of Masubuchi and further in view of Arimilli et al., U.S. Patent No. 6,058,456 (hereinafter "Arimilli"). Claim 13 was rejected over McDermott in view of Masubuchi and further in view of Otterness et al., U.S. Patent No. 6,460,122 (hereinafter "Otterness"). Claims 15 and 18 were rejected over McDermott in view of Masubuchi and further

in view of Stevens, U.S. Patent No. 5,724,550 (hereinafter "Stevens"). Claims 21-24 were rejected over Masubuchi in view of McDermott.

As described above, Applicants' independent claims 1 and 21 recite "a list structure for tracking a status of a plurality of cache entries, wherein *said list structure is located outside a cache* and wherein *said list structure does not contain cache data or addresses*." (emphasis added) Also noted above, Examiner admits that McDermott's does not disclose the list structure located outside the cache. (*See*, e.g., Figs. 2a and 4, col. 6, ll. 57-59, and col. 8, l.63-col. 9, l.17).

Examiner cites Masubuchi as disclosing a list structure located outside of a cache, referring to Fig. 1, the list structure described by Examiner as References 32, 33, and 34. In describing Fig. 1, Masubuchi states, "The cache flush device 30 includes a system bus interface 31, and update address memory 32 (consisting of regions A_0 to A_{n-1}), an update address registering section 33, and update address removing section 34 and a flush execution section 35." (col. 11, ll. 5-11) However, Masubuchi clearly states that References 32, 33, and 34 *hold memory addresses* throughout the various embodiments, which teaches away from Applicants' invention,. (*See*, e.g., col. 11, ll. 16-17; col. 11, ll. 50-52, col. 12, ll. 2-5; col. 12, ll. 51-55)

As further explanation for citing Masubuchi, Examiner claims the list structure "feature taught by Masubuchi reduces the logic in the cache, which provides space for other/additional logic or otherwise allows the size of the cache to be reduced. Additionally, this feature relieves the cache from processing cache flushes..." However, Applicants respectfully submit that this feature is **not** explicitly described or suggested by Masubuchi in the specification, nor does Examiner cite to any specific portion in the text.

In McDermott, the associativity of the list structure and the cache lines is achieved easily because the list structure is *inside* the cache. In Masubuchi, the list structure does not need to be

associated with specific cache lines because it contains *physical memory addresses*. Therefore, neither McDermott nor Masubuchi teach or suggest the list feature as described by Applicants. Further, Applicants assert that it would not be proper to combine the teachings of McDermott and Masubuchi because the references teach away from each other. It is improper to combine references where the references teach away from their combination. *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983) (The claimed catalyst which contained both iron and an alkali metal was not suggested by the combination of a reference which taught the interchangeability of antimony and alkali metal with the same beneficial result, combined with a reference expressly excluding antimony from, and adding iron to, a catalyst.). Specifically, it would not be obvious to those of skill in the art to put a list structure without addresses outside of a cache because no means for associating the list structure of the cache lines was taught by the prior art or known to those of ordinary skill in the art.

In addition and in the alternative, Applicants respectfully submit that there is no suggestion or motivation to combine McDermott and Masubuchi beyond the impermissible use of hindsight. Applicants submit that a *prima facie* case of obviousness has not been made. The MPEP requires that the references must suggest making the combinations. MPEP §2141.01 (citing *Hodosh v. Block Drug Co., Inc.*); §706.02(j) (the initial burden is on the examiner to provide a convincing line of reasoning with explicit or implicit suggestions to combine references).

Merely stating that it would have been obvious for a person of ordinary skill in the art to combine references, without pointing to a specific hint or suggestion to combine, has been rejected by the Federal Circuit, as an invalid basis of rejection under 35 U.S.C. §103. *In re Lee*, 277 F.3d 1338, 1343 (Fed. Cir. 2002)(the court held that rejecting a conclusory statement that it

would have been obvious to combine the references without evidence of a teaching, motivation, or suggestion to select and combine the references, citing numerous case); *In re Dembiczak*, 175 F.3d 994,999 (Fed. Cir. 1999) ("Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references.")

The Applicants therefore respectfully request Examiner to provide specific evidence of the teaching to combine McDermott and Masubuchi references or withdraw the rejection as improper.

With respect to other references cited by Examiner, Arimilli, Otterness, and Stevens do not overcome the above noted deficiencies of McDermott and Masubuchi. In particular, Arimilli, Otterness, and Stevens do not teach or suggest "a list structure for tracking a status of a plurality of cache entries, wherein said list structure is located outside a cache and wherein said list structure does not contain cache data or addresses," as recited in independent claims 1 and 21, and currently amended independent claim 16.

Therefore, Applicants assert that independent claims 1 and 21 contain allowable subject matter. Claims 2-15 and 22-24 depend from independent claims 1 and 21, respectively, and therefore also contain allowable subject matter. Accordingly, Applicants respectfully request that the rejections to claims 1-15 and 21-24 under 35 U.S.C. §103(a) be withdrawn.

With respect to independent claim 25, for similar reasons stated above, it would not be proper to combine the teaching of McDermott and Masubuchi because the references teach away from each other and should not be combined. Specifically, it would not be obvious to those of skill in the art to create a table of cache entries without addresses or cache data separate from the

cache because no means for associating the table to the cache lines was taught by the prior art or known to those of ordinary skill in the art.

Therefore, Applicants assert that independent claim 25 contains allowable subject matter. Claims 26-30 depend from independent claim 25, and therefore also contains allowable subject matter. Accordingly, Applicants respectfully request that the rejections to claims 25-30 under 35 U.S.C. §103(a) be withdrawn.
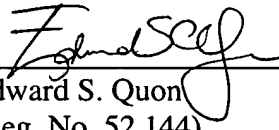
CONCLUSION

For all the above reasons, the Applicant respectfully submits that this application is in condition for allowance. A Notice of Allowance is earnestly solicited.

The Examiner is invited to contact the undersigned at (408) 975-7500 to discuss any matter concerning this application. The Office is hereby authorized to charge any additional fees or credit any overpayments under 37 C.F.R. §1.16 or §1.17 to Deposit Account No. **11-0600**.

Respectfully submitted,

KENYON & KENYON

Dated: <u>August 29, 2003</u>   By: _____

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